

**REMARKS**

The Official Action mailed July 2, 2008, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statements filed on December 8, 2003; and January 21, 2005.

Claims 6-30 were pending in the present application prior to the above amendment. Independent claims 6, 12, 17 and 23 have been amended to better recite the features of the present invention, and new dependent claims 31-34 have been added to recite additional protection to which the Applicant is entitled. Accordingly, claims 6-34 are now pending in the present application, of which claims 6, 12, 17 and 23 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 6-22 and 29 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Official Action appears to be concerned that the recitation of "40 dyne/cm or more" has no upper limit, that the recitation of "less than 3.5  $\mu\text{m}$ " has no lower limit and that the scope of such claim could theoretically include a value of zero "that would be inoperative" (pages 2-3, Paper No. 20080625). In response, the Applicant has amended claims 6 and 12 to recite "greater than or equal to 40 dyne/cm and less than 70 dyne/cm," which is supported in the present specification, for example, by Figure 4. Also, the Applicant has amended claims 6, 12 and 17 to recite "greater than 0  $\mu\text{m}$  and less than 3.5  $\mu\text{m}$ ," which excludes the possibility of a value of zero.

The Applicant respectfully submits that the amended claims particularly point out and distinctly claim the subject matter which applicant regards as the invention and are

definite. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 112 are in order and respectfully requested.

The Official Action rejects claims 23, 26-28 and 30 as anticipated by U.S. Patent No. 5,040,876 to Patel. The Applicant respectfully submits that an anticipation rejection cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP § 2131, to establish an anticipation rejection, each and every element as set forth in the claim must be described either expressly or inherently in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Independent claim 23 already recites orientation films having antiparallel orientation directions to each other and has been amended to recite that the pair of orientation films comprises the same material. On the other hand, Patel appears to disclose using different alignment materials (e.g. column 3, lines 50-59). Therefore, the Applicant respectfully submits that Patel does not teach that a pair of orientation films comprises the same material, either explicitly or inherently.

Further, at this opportunity, the Applicant has amended claim 23 to recite a specific range for the surface tension of the orientation films in order to better recite the features of the present invention.

Since Patel does not teach all the elements of the independent claims, either explicitly or inherently, an anticipation rejection cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 are in order and respectfully requested.

The Official Action rejects dependent claim 24 as obvious based on the combination of Patel, U.S. Patent No. 5,276,132 to Nishikawa and U.S. Patent No. 4,965,017 to Holmes. The Official Action rejects dependent claim 25 as obvious based on the combination of Patel and U.S. Patent No. 4,697,884 to Amstutz. The Official Action rejects claims 6, 9-12, 17-22 and 29 as obvious based on the combination of

Patel, U.S. Patent No. 4,878,742 to Ohkubo and U.S. Patent No. 5,250,214 to Kanemoto. The Official Action rejects claims 7, 13 and 18 as obvious based on the combination of Patel, Ohkubo, Kanemoto, Nishikawa and Holmes. The Official Action rejects claims 8, 14 and 19 as obvious based on the combination of Patel, Ohkubo, Kanemoto and Amstutz. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Independent claims 6, 12 and 17 already recite orientation films having antiparallel orientation directions to each other and have been amended to recite that the pair of orientation films comprises the same material. That is, the present invention discloses antiparallel orientation directions obtained, for example, by rubbing of the orientation films which comprise the same material.

There is no proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, (1) to combine Patel and Holmes or Nishikawa or (2) to combine Patel and Kanemoto to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden. While the Official Action relies on various teachings of the cited prior art to disclose aspects of the claimed invention and asserts that these aspects could be used together, it is submitted that the Official Action does not adequately set forth why one of skill in the art would combine the references to achieve the features of the present invention.

The test for obviousness is not whether the references "could have been" combined or modified as asserted in the Official Action, but rather whether the references should have been. As noted in MPEP § 2143.01, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (emphasis in original). KSR International Co. v. Teleflex Inc., 550 U.S. \_\_\_, \_\_\_, 82 USPQ2d 1385, 1396 (2007). Thus, it is respectfully submitted that the standard set forth in the Official Action is improper to support a finding of *prima facie* obviousness.

(1) Regarding the alleged combination of Patel and Holmes or Nishikawa, the Official Action concedes that Patel does not teach "that each of said orientation films comprises polyimide" (page 5, Paper No. 20080625). The Official Action relies on Holmes to allegedly teach these features at column 1, lines 44-52. The Official Action asserts that "it would have been obvious ... to have the orientation films comprised in polyimide in Patel et al display device for providing a molecular alignment of the liquid crystal molecules along a rubbing direction and for having a small tilt bias angle ... as taught by Holmes ... and Nishikawa" (*Id.*). The Applicant respectfully disagrees and traverses the above assertions in the Official Action.

As noted in MPEP § 2143.01, Part V, if a proposed modification renders the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Also, as noted in MPEP § 2143.01, Part VI, if a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

As noted above, Patel discloses using different alignment materials for layers 34 and 36 (column 3, lines 50-59). Specifically, Patel selects different alignment materials for each of layers 34 and 36 because the different materials “exhibit a different anchoring strength or binding force with respect to the molecules of the liquid crystal material in the layer 38” (column 3, lines 53-56).

The Official Action appears to propose a modification of Patel where these layers having different materials would be replaced with layers having the same material. However, if the same material is used for both layers 34 and 36 of Patel, then Patel would be rendered unsatisfactory for its intended purpose. That is, the Examiner’s proposed modification or combination of the prior art appears to change the principle of operation of the prior art invention being modified. Therefore, there is no suggestion or motivation to make the proposed modification, and the teachings of the references are not sufficient to render the claims *prima facie* obvious.

The Applicant respectfully submits that Amstutz, Ohkubo and Kanemoto do not cure the above-referenced deficiencies in Patel and Holmes or Nishikawa.

(2) Regarding the alleged combination of Patel and Kanemoto, the Official Action concedes that “Patel et al fail to teach that the orientation films have a surface tension of 40 dyne/cm or more” (page 7, Paper No. 20080625). The Official Action asserts that “Kanemoto et al. teach ... forming the orientation film with a surface tension of not smaller than 40 dyne/cm for spreading the LC polymer in its LC phase uniformly

on a coated surface of an orientation film" (page 8, Id.) and that it would have been obvious to combine Patel and Kanemoto for this reason. The Applicant respectfully disagrees and traverses the assertions in the Official Action.

Initially, the Applicant notes that the objectives of the present invention (as shown, for example, at page 5, lines 20-23 of the present specification) are different from those disclosed in Kanemoto. Specifically, Kanemoto appears to be concerned with the surface tension of a device where "only one substrate is used" (column 26, line 58). In such device, "it is necessary for LC polymer ... to spread uniformly" (column 26, lines 61-62). As such, Kanemoto teaches a particular surface tension, but this surface tension appears to be for a device where only one substrate is used. Kanemoto does not teach or suggest using this particular surface tension for all devices, particularly those that utilize two substrates having orientation films. The Official Action has not demonstrated why one of ordinary skill in the art at the time of the present invention would have combined the substrate or orientation film of Kanemoto, where only one substrate is used, with a device having a pair of substrates having orientation films, such as Patel.

The Applicant respectfully submits that Holmes or Nishikawa, Amstutz and Ohkubo do not cure the above-referenced deficiencies in Patel and Kanemoto.

Therefore, the Applicant respectfully submits that the Official Action has not provided a proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, (1) to combine Patel and Holmes or Nishikawa or (2) to combine Patel and Kanemoto to achieve the claimed invention.

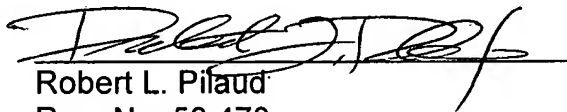
In the present application, it is respectfully submitted that the prior art of record, either alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

For the reasons stated above, the Official Action has not formed a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

New dependent claims 31-34 have been added to recite additional protection to which the Applicant is entitled. The features of claims 31-34 are supported in the present specification, for example, by page 5, lines 16-19. The Applicant respectfully submits that new claims 31-34 are in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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